

REMARKS

Initially, applicant would like to thank the Examiner for the helpful and courteous telephonic interview he conducted with applicant's undersigned representative on July 17, 2003. No particular agreement was reached during such interview.

Upon entry of the present Amendment-C the claims in the application remain claims 1-3, 5-9, and 12-20, of which claims 1, 3 and 17 are independent.

Applicant encloses herewith a clean copy of the revised specification including all of the changes indicated in the marked-up copy of the revised specification included with Amendment-B dated April 3, 2003, as well as a copy of and Figs. 2, 4, 7, 9, 11, 14, 17, 19 and 21 including red markings showing changes made to the drawings in Amendment-B, and a Verified Statement from applicant's undersigned representative that the revised specification contains no new matter.

Independent claims 1, 3 and 17 are amended to more specifically define that the at least one penetrating portion, or joint portion, *is located only in the gas flow path portion*, and claim 18 is amended to properly depend from claim 17 and to refer to –gas flow-- rather than “air flow”.

Applicant respectfully submits that all of the above amendments are fully supported throughout the original application, including the drawings, and that the above amendments do not introduce any new matter into the application.

Applicant further respectfully submits that the above amendments do not raise any new issues for consideration by the Examiner in that the changes to the independent claims merely clarify the specific location of the penetrating portion(s) or joint portion(s) within the gas flow path consistent with the arguments previously presented in Amendment-B and with the emphasis of the original disclosure. Additionally, it is noted that the final Office Action presents a new ground of rejection that was not necessitated by the claim modifications introduced in Amendment-B, i.e., the rejection of claim 3 under 35 USC 102(e) based on the Shiota patent. While claim 3 was amended in Amendment-B, it was narrowed in scope by further defining the gas flow and joint portions. Surely, if Shiota is asserted to anticipate the narrower version of claim 3, it could have been asserted to anticipate the earlier broader version.

Applicant also respectfully submits that the above amendments to the specification and drawings overcome the Examiner's objections set forth at item 1 of the present Office Action, and those set forth in the prior Office Action dated 06 January 2003 and accordingly it is respectfully requested that the objections be reconsidered and withdrawn.

Similarly, applicant respectfully submits that the amendments to claim 18 overcome the Examiner's rejection of same under 35 USC 112, second paragraph, set forth at item 3 of the Office action, and it is respectfully requested that the rejection be reconsidered and withdrawn.

Art Based Rejections

In the final Office Action of 11 June, the Examiner maintains essentially the same grounds of rejection as he made in the first Office Action based on the Shiota et al. and Maruyama, but additionally rejects claims 3 and 16-20 based on Shiota. Specifically, claims 1-3, 7 and 16-20 are rejected under 35 U.S.C. 102(e) as anticipated by Shiota et al. (US Patent 5,427,410), while claims 3-5 and 12-15 are rejected under 35 U.S.C. 102(b) as anticipated by Maruyama (US Patent 5,593,179), and claims 6, 8 and 9 are rejected 35 U.S.C. 103(a) as being unpatentable over Shiota. It is the Examiner's position that Shiota's airbag 10 having the cylindrical cloth 108 disposed therein reads on the airbag having at least one penetrating portion or at least one joint portion as defined in claims 1-3, 7 and 16-20, that Maruyama's airbag with the guide member disposed therein reads on 3-5 and 12-15, and that it would have been obvious to provide multiple cylindrical cloths in Shiota's air bag for multiple effect as an obvious design variant.

Applicant's Response

Upon careful consideration and in light of the above amendment to claims 1, 3 and 17 applicant respectfully submits that the Examiner's rejections are overcome and that each of present claims 1-3, 5-9 and 12-20 is clearly patentably distinct over the air bags of Shiota and Maruyama, based on the amendments, and based those reasons as presented in Amendment-B, e.g., the cylindrical cloth 108 of Shiota and the guide members 20, 28, 30 of Maruyama do not read on and do not make obvious the penetrating portion and the joint portion required by the independent claims because such cylindrical cloth and guide members are not disposed in a gas flow path extending continuously from the gas inlet opening of the airbag and do not divide the

gas flow path portion into two or more paths for flowing gas from the opening portion into the occupant restraint portion; nor do such cylindrical cloth 108 and guide members 20, 28, 30 disclose or make obvious features set forth in the dependent claims; while the claimed invention achieves significant advantages over the systems of Shiota and Maruyama.

Relative to the above amendments, each of the independent claims now defines that the penetrating portion(s) and the joint portion(s) are located only in the gas flow path of the airbag. Conversely, Shiota's cylindrical cloth 108 extends significantly within the occupant restraint portion of his air bag, as shown, and must be so located given functions it is required to accomplish, i.e., causing the lower portion of the air bag to inflate first, and readily discharging gas from the airbag when the bag impacts with an occupant. On the other hand, Maruyama's guides 20, 28 also extend within the occupant restraint portion of his airbag causing certain sections(s) of the occupant restraint portion (upper and lower sections or an upper section) to inflate prior to other section(s)s (a middle front sections or middle front and lower sections), while his guide 30 is disposed entirely within the occupant restraint portion.

Applicant respectfully submits that the above distinction is very significant because the claimed air bag including the penetrating portion(s) or the joint portion(s) permits a much simpler and versatile adjustment of airbag characteristics than the air bags of Shiota and Maruyama. Particularly, because the penetrating portion(s) and the joint portion(s) are located only in the gas flow portion of the air bag, any necessary adjustments required to achieve a desired restraining characteristic are of a relatively small scale in comparison because the gas flow portion itself is of comparatively small scale. Further, any maintenance of the occupant restraint performance of the air bag is eased, again, because the penetrating portion(s) and the joint portion(s) do not extend into the occupant restraint portion of the airbag.

Initially, applicant respectfully submits that Shiota's air bag does not include or make obvious an air bag including a penetrating portion extending through a gas flow path as now defined in amended claim 1. Particularly, claim 1 more specifically defines the location of the penetrating portion extending through the gas flow path portion that extends continuously from an opening portion of the air bag into which gas generated by the inflator flows. As shown in the drawings, for example in Figs. 1-3, the gas flow path portion 16 directly receives the gas

from the inflator as the gas enters air bag , and the gas must pass through the portion 16 before it enters the (much larger) occupant restraint portion 17. As discussed in the application, the presence of the penetrating portion in the gas flow path portion reduces the area through which gas enters the air bag, and thereby it is possible to easily alter/control the rate at which gas from the inflator enters the air bag by selecting an appropriately sized/shaped penetrating portion . As explained, this is very advantageous because it permits a given inflator to be easily, properly and compatibly matched with different sized air bags required for different vehicle types.

Quite differently, Shiota teaches an air bag 10 including a cavity 20 extending from the left side to the right side in the large occupant restraint portion of the airbag, spaced from the gas flow path portion of the air bag where gas from the inflator enters the air bag, and also including a vent hole 24 formed in a wall of the cavity 20 so that inflating gas within the fully extended air bag may be vented to the outside through the cavity, especially when the air bag is engaged by a vehicle occupant (e.g., see Shiota's Fig. 6). The cavity is formed by a cylindrical cloth 108 which is sewn or otherwise attached to outer surfaces of the airbag panel to define opposite side openings 106, 107 that communicate with the outside. As discussed by Shiota, the disposition of the cavity within the occupant restraint portion of the air bag closer to the occupant rather than to the inflator, permits a lower portion of the air bag to extend earlier than an upper portion of the air bag. Thus, while the cavity 20 reduces the volume of gas needed to fill his air bag for permitting a smaller inflator to be used and/or permitting the air bag to be inflated more quickly, as noted by Shiota, the cavity does not permit the flow of gas entering into the air bag to be easily controlled, as does the claimed invention. Nor would it ever be obvious to modify Shiota's cavity 20 by placing same in the gas flow path portion of his air bag, as claimed, given Shiota's full disclosure of the cavity 20, including the vent hole 24, and its function.

Moreover, applicant respectfully submits that the above distinction is very significant because the claimed invention, again, permits a given inflator to be readily and easily compatible with various sized airbags by simply extending an appropriately sized/shaped penetrating portion in the gas flow path portion of the air bag, while the penetrating portion is desirable smaller and less involved than Shiota's cavity 20.

Further, applicant respectfully submits that Shiota's and Maruyama's air bags do not include or make obvious features of the dependent claims more specifically defining the penetrating portion in relation to the gas flow path portion (which, again, is further defined relative to the air bag opening in claim 1). For example, given the disposition of the cavity 20 in the occupant restraint portion of Shiota's air bag, it does not divide his gas flow path portion into two or more flow paths for flowing the gas from the opening portion to the occupant restraint portion as defined in claim 2, nor does it reduce an opening area of the gas flow path portion as defined in claim 7. Further it does not include multiple penetrating portions as defined in claim 6 or multiple penetrating portions meeting the additional limitations of claims 8-9, nor does Maruyama's airbag include multiple guides located only in the gas flow portion, given the disposition of his entire guide 30 and sections of his guides 20, 28 within the occupant restraint portion of his air bag. Still further, while Shiota discusses location of his vent hole 24 other than as shown, such comment merely refers to other locations *on his cylindrical cloth*, such that the cylindrical cloth would still vent gas outside of the air bag according to Shiota's disclosed function, and contrary to the requirement of claims 16-18 that the penetrating portion is sealed.

In this regard, applicant notes the Examiner's reference to St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir. 1977). Besides the fact that this old case was not decided by the CCPA or its successor court the CAFC, it is respectfully submitted that such case is not factually similar to the present matter and does not support the Examiner's allegation that it would have been obvious to provide multiple cylindrical cloths in Shiota's air bag. In St. Regis, the matter in question was the whether it have been obvious to include multiple layers in the construction of a bag where it was conventionally known in the prior art to use multiple layers to achieve the effect of many bags within one. On the other hand, in the present matter there is no showing or suggestion in the prior art that it would have been obvious to use multiple cylindrical cloths to achieve a multiplied effect. Rather, at most, any suggestion that may be fairly gleaned from Shiota's disclosure, is simply that *the size of the one/single cylindrical cloth may be appropriately adjusted to achieve the disclosed effect*. This is, of course, contrary to the claimed invention and supports the *unobviousness* of the discussed feature.

Based on the foregoing, the Examiner's rejections of claims 1-3, 5-9 and 12-20 based on

the Shiota and Maruyama references are believed to be overcome, and accordingly it is respectfully requested that the rejections be reconsidered and withdrawn.

Other Matters

The additional reference, Abramczyk et al., cited by the Examiner at item 10 of the Office Action has been considered by applicant, but it is respectfully submitted that these additional reference fails to overcome the deficiencies of the Shiota and Maruyama references discussed above in relation to the present claims.

Conclusion

In conclusion, applicant has overcome the Examiner's objections and rejections as presented in the Office Action; and moreover, applicant has considered all of the references of record, and it is respectfully submitted that the invention as defined by each of the present claims is clearly patentably distinct thereover.

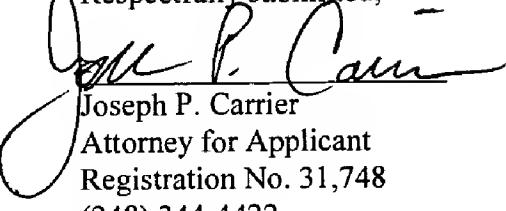
The application is now believed to be in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner is not fully convinced of all of the claims now in the application, applicant respectfully requests that she telephonically contact applicant's undersigned representative to expeditiously resolve prosecution of the application.

Entry of the present Amendment-C is respectfully requested under 37 CFR 1.116 on the grounds that: the amendment does not raise any new issues for consideration for the Examiner; the Amendment overcomes (at least) the rejection of claim 18 under 35 USC 112, second paragraph, and simplifies issues on appeal (if necessary); the Office Action appears to have been made prematurely final; and moreover, the Amendment-C is believed to place the application in condition for allowance.

Favorable reconsideration is respectfully requested.

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Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the US Postal Service as First Class Mail in an envelope addressed to Mail Stop AF, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on September 10, 2003.

JPC/ms
Enclosures

